Environmental Concerns and Opportunities for Resolution

Concern 1: Uncertainty of groundwater flow once Treated Water Infiltration System (TWIS) is operational

Solution 1: Additional monitoring wells

- Add three wells to be located to the northeast, east, and southeast of the TWIS. The purpose of these wells is to determine the local groundwater flow with more certainty and provide a timely warning should problems arise due to any groundwater mounding at the site.

Concern 2: Uncertainty regarding the interaction between the introduced wastewater and the existing groundwater aquifer

Solution 2: Additional monitoring wells

- Add three wells to be located several hundred feet downgradient (in the direction of predicted groundwater flow) of the TWIS. The purpose of these wells is to provide more robust groundwater monitoring beyond the wells in the area of the TWIS to measure whether any interaction between the introduced wastewater and the existing groundwater and/or sediments may cause contamination. Any interactions are expected to be better observed outside the immediate area of the TWIS.

Concern 3: Pollutants from vehicle/mechanical operations have not been included

Solution 3: Monitor for additional constituents

- To address concerns that there could be fuel spills at the facility, include the following constituents: Benzene, Xylene, Toluene (reference MCLs).

Concern 4: Pollutants, such as radionuclides, that may be present in the ore-body have not been included

Solution 4: Monitor for radionuclides constituents

- The following radioactive constituents with federal MCLs could be present in the area bedrock:
    - Alpha Particles
    - Beta Particles and Photon Emitters
    - Uranium
    - Radium

Concern 5: Uncertainty regarding how environmental problems (such as those listed below) will be addressed:

- MCL exceedances are found in the groundwater
- Water quality at the seeps downgradient from the TWIS is degraded

Solutions 5: Implement the following actions to address any environmental problems

- Cease discharge into the TWIS if MCL is exceeded in the effluent at the point of injection/discharge.
- Develop a corrective action plan if Secondary Drinking Water Standards are exceeded in the effluent at the point of injection.
- Install groundwater monitoring well(s) downgradient from the TWIS to assess whether groundwater venting to the seeps exceed surface water quality criteria.
- Cease injection if surface water quality at the seeps downgradient from the TWIS is expected to be degraded based on the groundwater monitoring identified above. Work with MDNRE to modify permit limits (or get an NPDES permit) to ensure surface water is protected.